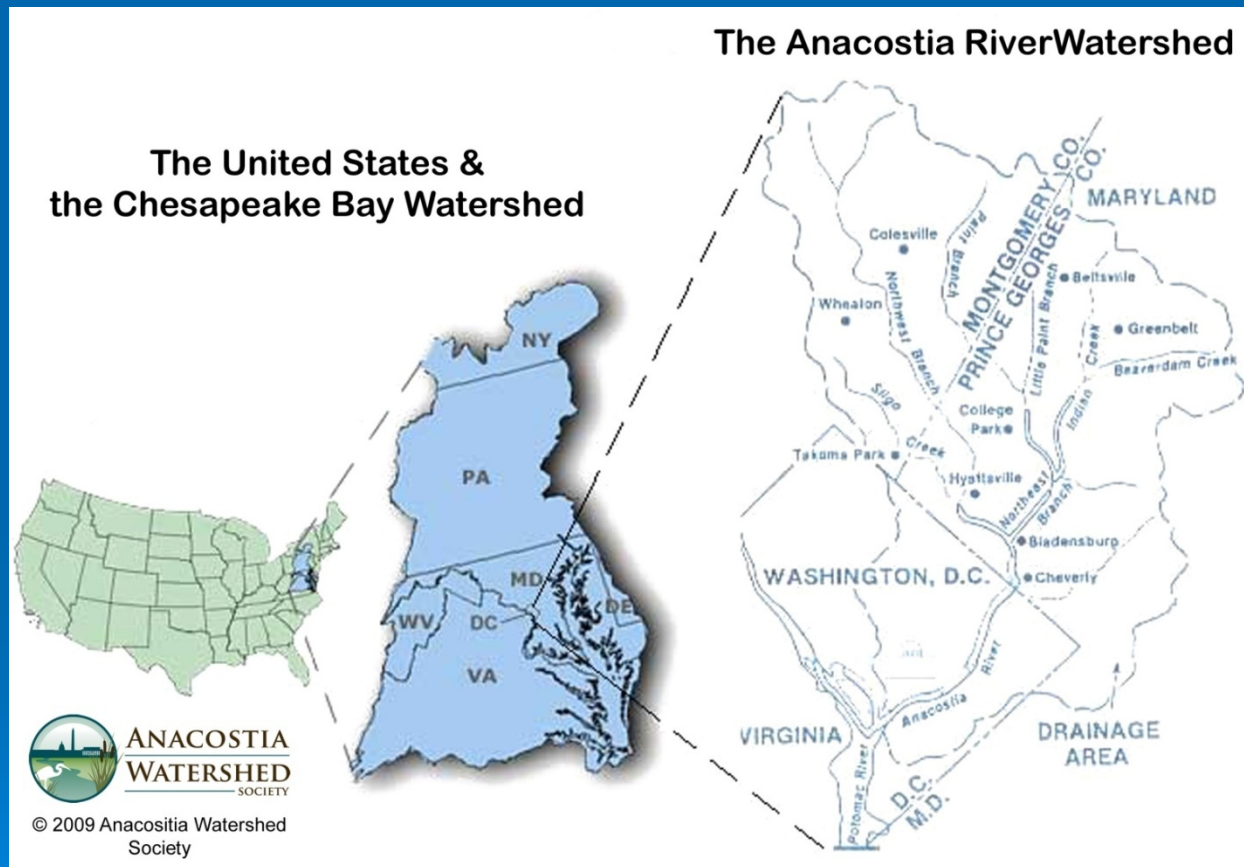
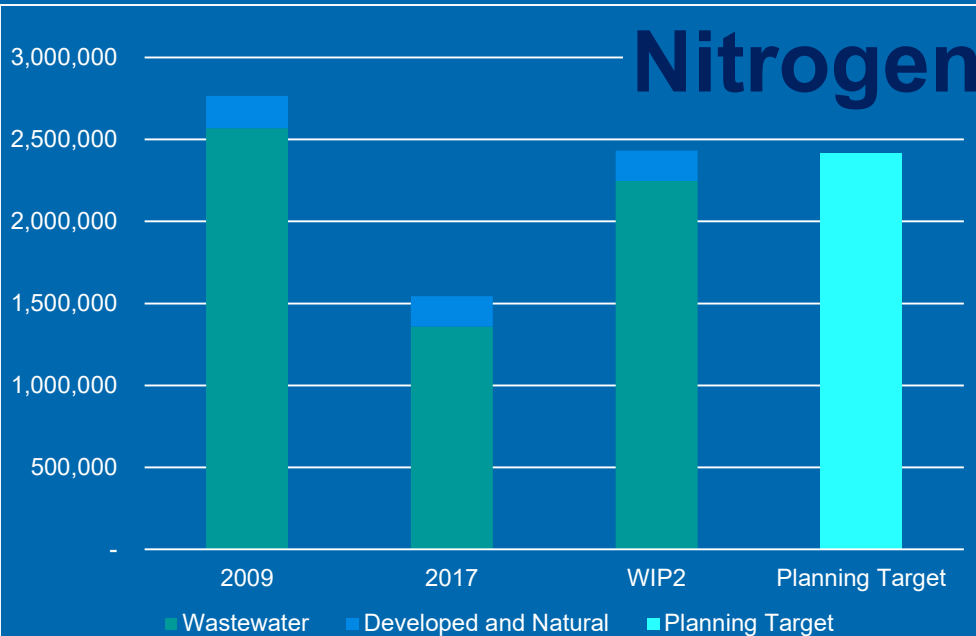


Nutrient Reduction in the District of Columbia

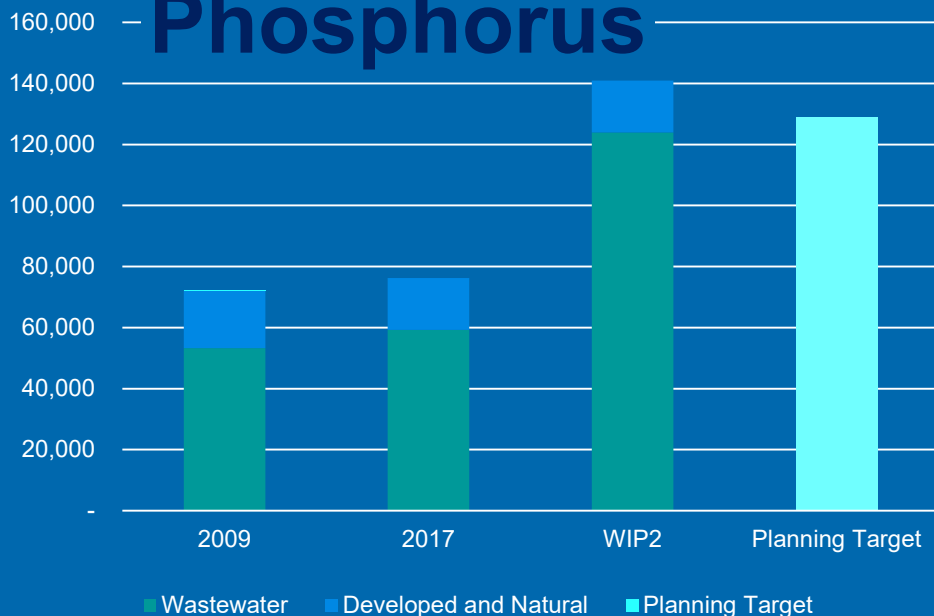


District Nutrient Loads

Nitrogen



Phosphorus



- District planning target addresses climate change impacts
- ~90% pollution is from wastewater
- Much progress already
- Wastewater pollution will increase with growth
- Still more work to be done to reduce stormwater pollution

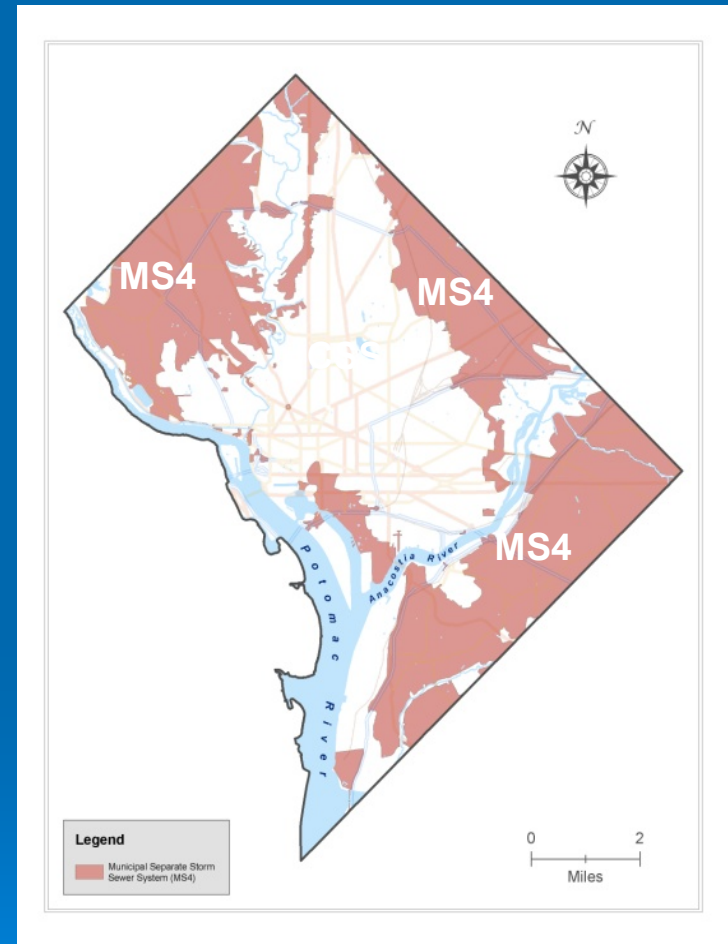
Blue Plains WWTP



- \$950 Mil enhanced nitrogen removal completed in 2015
- Meets effluent limit of 4.0 mg/L

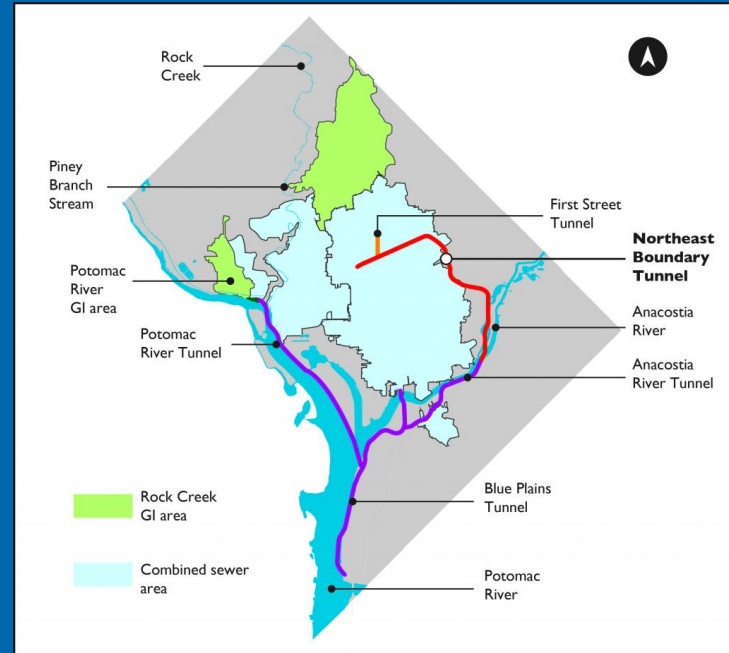
Combined Sewer System

- 1/3 of the District
- 3.2B gallons of sewage and stormwater overflows annually (historically)



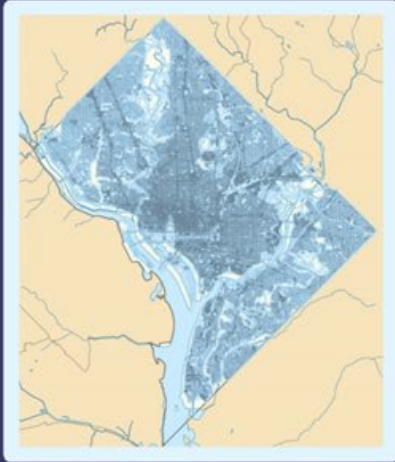
Clean Rivers Project

- \$2.6B+ capital project
- Will reduce combined sewer overflows by 96%
- Anacostia Tunnel completed in 2018
- Final completion in 2030



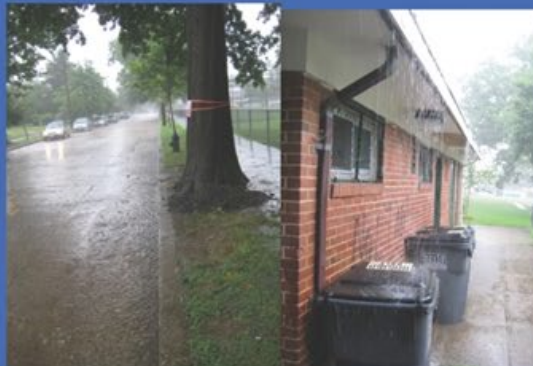
Stormwater Runoff

IMPERVIOUSNESS



43% IMPERVIOUS

1.2 INCH STORM=
525 MILLION GALS
OF RUNOFF

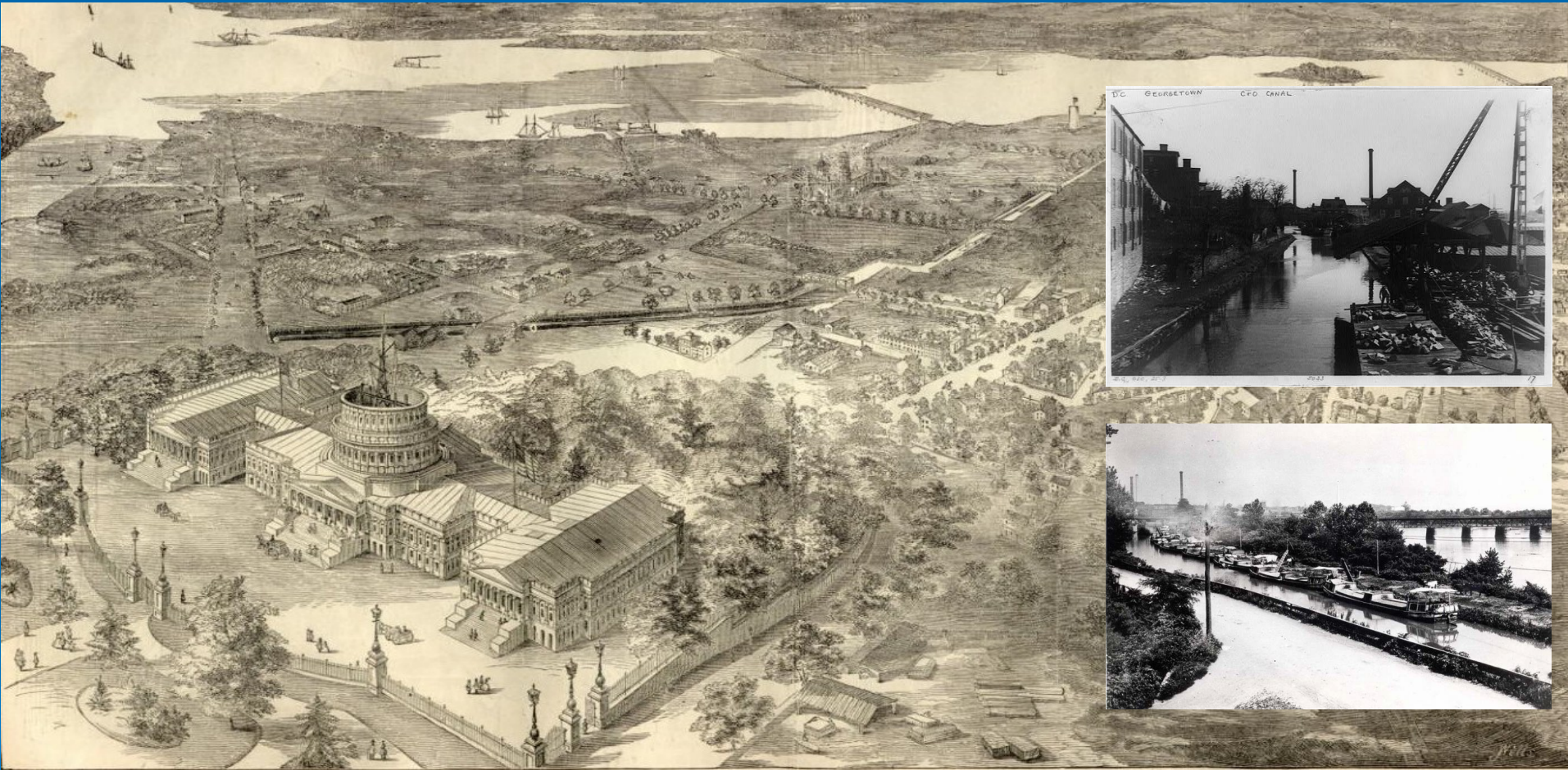


STORMWATER



DEGRADATION

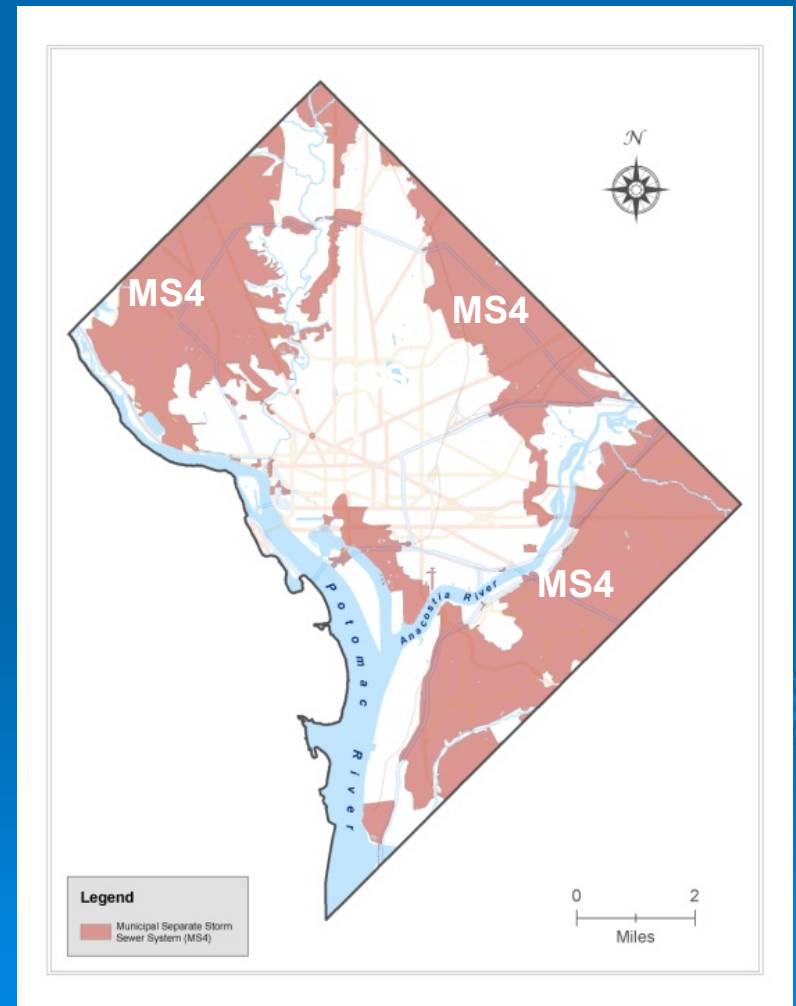
Challenges Many Years in the Making



Stormwater Runoff

➤ Separate Storm Sewer Sys

- 2/3 of District
- Direct discharge without treatment
- \$7B + GI build-out
- \$10 Mil/yr public funds for GI



Stormwater Improvements

STORMWATER IMPROVEMENTS

GOALS

TURN BACK THE CLOCK
ON DEVELOPMENT

RETROFIT IMPERVIOUS SURFACES
WITH **GREEN INFRASTRUCTURE**

LAYERED PROGRAMS

DIRECT PUBLIC INVESTMENT

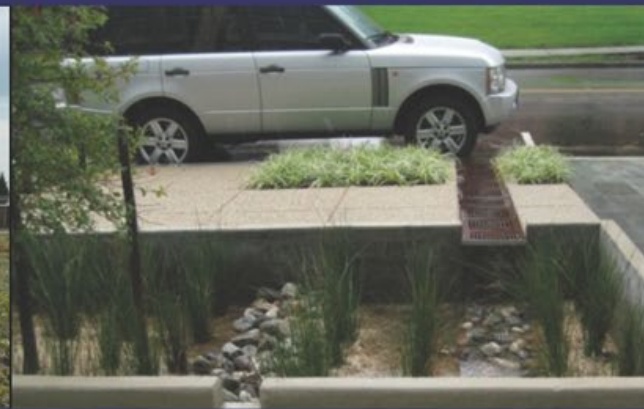
INCENTIVES

REGULATIONS



Stormwater Improvements

STORMWATER IMPROVEMENTS DIRECT PUBLIC INVESTMENT



TRANSPORTATION RIGHT-OF-WAY
PUBLIC BUILDINGS
STREAM RESTORATIONS

Stormwater Improvements

STORMWATER IMPROVEMENTS INCENTIVE PROGRAMS



SUBSIDIES FOR PRIVATE SECTOR (RIVERSMART)
STORMWATER FEE DISCOUNT PROGRAM
STORMWATER RETENTION CREDIT TRADING MARKET

Revised Stormwater Regulations

- Effective January 2014
- Land-disturbing activities must retain the first 1.2" of rainfall.
- Interior renovation projects must retain the first 0.8" of rainfall.



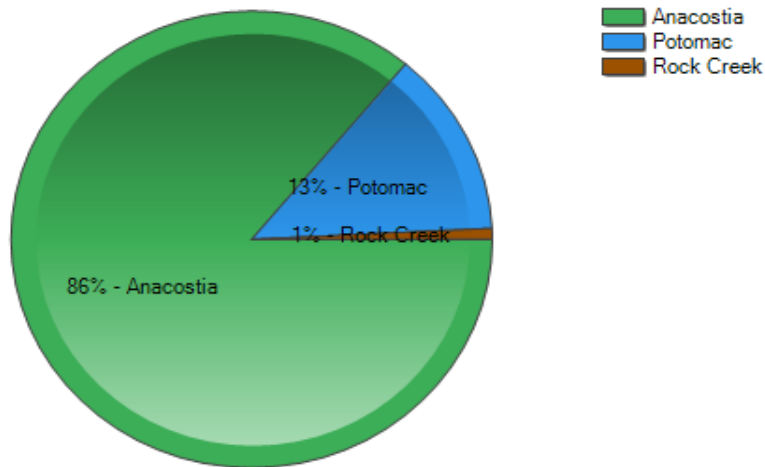
Practical Approach: Off-Site Flexibility

- Free to go off site after achieving 50% of required retention on site.
- Off site options include purchase of stormwater retention credits or fee-in-lieu payments

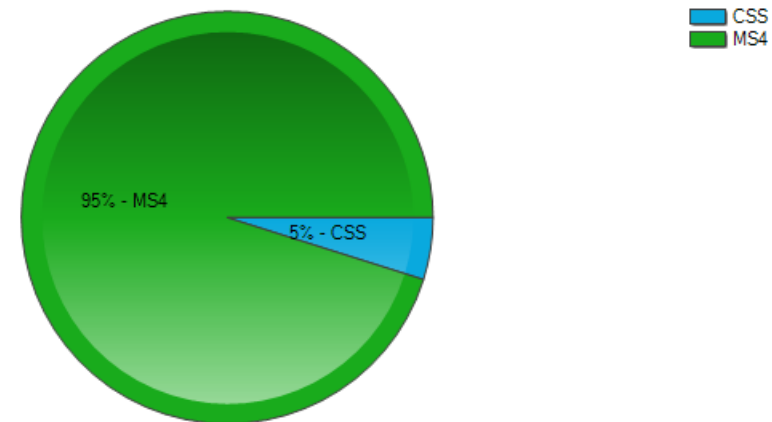


Stormwater Retention Credits (SRCs)

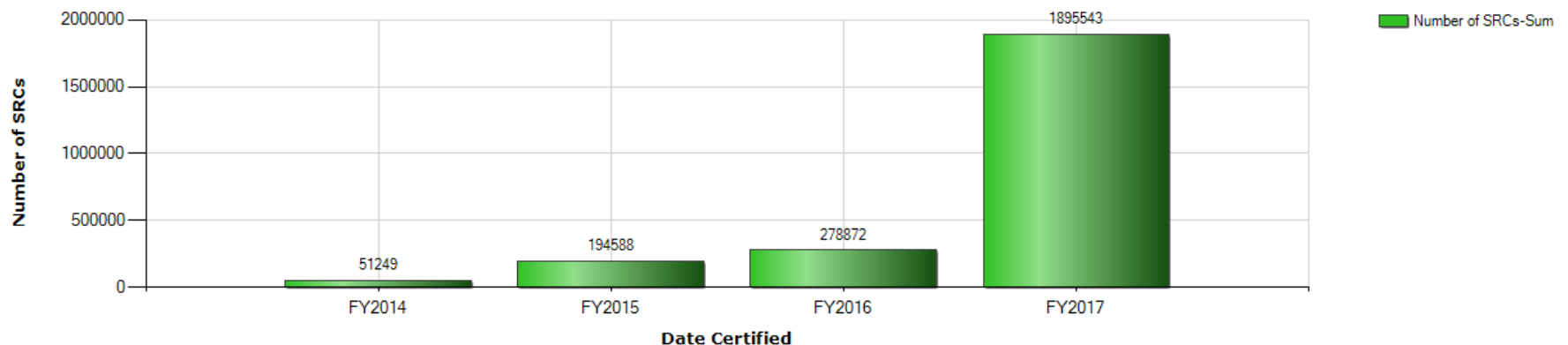
SRCs Certified per Watershed



SRCs Certified per Sewershed



SRCs Certified Each Fiscal Year

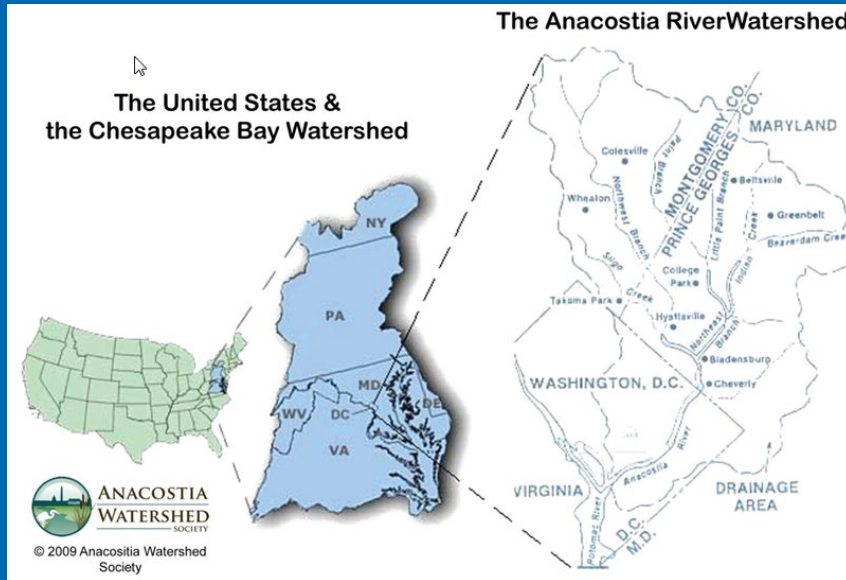


Program Results

- GI is now standard practice
- 39 SRC trades completed
- Voluntary Private Investments in GI
- Over 4000 residential properties retrofit
- Over 3.8 Mil SF of green roof installed
- Forecast that 30% of MS4 impervious surfaces will be retrofit by 2040
- Monitoring demonstrates positive trends



Upstream Sources



- The District of Columbia makes up only:
 - 0.5% of Potomac River Watershed
 - 18% of Anacostia River Watershed
 - 21% of Rock Creek watershed
- Pollution from beyond the District impacts our waters

Upstream Sources

- Federal Partnerships
 - Chesapeake Bay Program
 - Urban Waters Initiative
 - Federal Stormwater MOU
- Regional coordination and collaboration to ensure District programs and efforts are mirrored upstream – Council of Governments

QUESTIONS?

Jeffrey Seltzer – jeffrey.seltzer@dc.gov

Stormwater Plan - dcstormwaterplan.org

SRC trading - doee.dc.gov/src

Stormwater management regulations - doee.dc.gov/swregs

RiverSmart Programs - doee.dc.gov/riversmart

